EXHIBIT NO. ___(RG-1CT)
DOCKET NO. UG-15____
2015 LNG FILING
WITNESS: ROGER GARRATT

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of **PUGET SOUND ENERGY, INC.** **for (i) Approval of a Special Contract for Liquefied Natural Gas Fuel Service with Totem Ocean Trailer Express, Inc. and (ii) a Declaratory Order Approving the Methodology for Allocating Costs Between Regulated and Non-regulated Liquefied Natural Gas Services**	**DOCKET NO. UG-15____**

PREFILED DIECT TESTIMONY (CONFIDENTIAL) OF ROGER GARRATT ON BEHALF OF PUGET SOUND ENERGY, INC.

CONFIDENTIAL PER
WAC 480-07-160

AUGUST 11, 2015

PUGET SOUND ENERGY, INC.

PREFILED DIRECT TESTIMONY (CONFIDENTIAL) OF ROGER GARRATT

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PUGET SOUND ENERGY INC.

PREFILED DIRECT TESTIMONY (CONFIDENTIAL) OF ROGER GARRATT

I. INTRODUCTION

Q. Please state your name, business address, and position with Puget Sound Energy, Inc.

A. My name is Roger Garratt. My business address is 10885 NE 4th Street, P.O. Box 97034, Bellevue WA 98009-9734. I am employed by Puget Sound Energy, Inc. ("PSE") as the Director of Strategic Initiatives.

Q. Have you prepared an exhibit describing your education, relevant employment experience, and other professional qualifications?

A. Yes, I have. It is Exhibit No. ___(RG-2).

Q. What are some of your duties as Director of Strategic Initiatives?

A. My present responsibilities include oversight of: (i) the acquisition and development of electric resources for PSE; (ii) contracts for long-term electric supply; and (iii) PSE's emerging technology investigations and strategies.

Q. What is the nature of your prefiled direct testimony in this proceeding?

A. This prefiled testimony provides a discussion with respect to each of the following:

1. background regarding the need for the Tacoma Liquefied Natural Gas Project (the "Tacoma LNG Project");

2. an overview of the Tacoma LNG Project;

3. project schedule and capital budget associated with the Tacoma LNG Project; and

4. PSE's cost allocation methodology associated with the Tacoma Liquefied Natural Gas Facility (the "Tacoma LNG Facility").

This prefiled direct testimony concludes with PSE's request that the Commission issue:

(i) an order approving the TOTE Special Contract as a special contract pursuant to and consistent with the requirements of WAC 480-80-143; and

(ii) a declaratory order approving PSE's proposed methodology for allocating the costs of the Tacoma LNG Facility, which is consistent with the current cost allocation methodology approved by the Commission in Docket Nos. UE-960195 and U-072375, for use with respect to the allocation of costs and revenues associated with the regulated and non-regulated services that PSE will provide from the Tacoma LNG Facility.

Q. Why does PSE use the terms "Tacoma LNG Facility" and "Tacoma LNG Project" differently?

A. PSE uses the term "Tacoma LNG Facility" to refer to the following:

- buildings, gas processing, storage and support equipment, and foundations located on PSE's leased site at the Port of Tacoma;
- underground LNG fuel line connecting the LNG tank to TOTE's berthing area, marine fueling system and in-water platform at TOTE's site
- LNG tanker truck loading racks; and
- the ground lease from the Port of Tacoma.

PSE uses the term "Tacoma LNG Project" to refer to the following:

- the development, construction and operations of the Tacoma LNG Facility;
- improvements to PSE's gas distribution system needed to support the Tacoma LNG Facility;
- regulatory approvals to provide the following regulated services:
  - (i) the operation of the Tacoma LNG Facility to provide additional peaking capability for PSE's core gas customers
  - (ii) the operation of the Tacoma LNG Facility to provide LNG to TOTE for use as a marine fuel; and
- commercial contracts to sell LNG to non-TOTE customers for use as fuel as a non-regulated service.

II. BACKGROUND REGARDING THE NEED FOR THE TACOMA LNG PROJECT

Q. Please describe PSE's need for new peak-day resources to serve its retail natural gas customers.

A. PSE's need for new peak-day resources to serve its retail natural gas customers is set forth in the 2013 Integrated Resource Plan (the "2013 IRP"). The 2013 IRP considered expected customer loads, including the effect of demand-side resource programs, based on expected regional economic growth. The 2013 IRP demonstrates a need for peaking resources beginning in 2017, and PSE's deficit is expected to grow to approximately 150,000 decatherms ("Dth") per day by 2022, and 200,000 Dth per day by 2026.

The 2013 IRP projected that PSE will meet the resource needs with

(i) additional Jackson Prairie storage (50,000 Dth per day) purchased from Avista Utilities and Williams-Northwest Pipeline redelivery transportation service;

(ii) the Tacoma LNG Facility (85,000 Dth per day); and

(iii) upgrading the SWARR propane-air facility (30,000 Dth per day; refurbishment is currently under evaluation).

Please see the Prefiled Direct Testimony of Clay Riding, Exhibit No. ___(CR-1HCT), for a discussion of PSE's identification of need in the 2013 IRP.

Q. How did PSE evaluate resource alternatives available to identify the resources mentioned above?

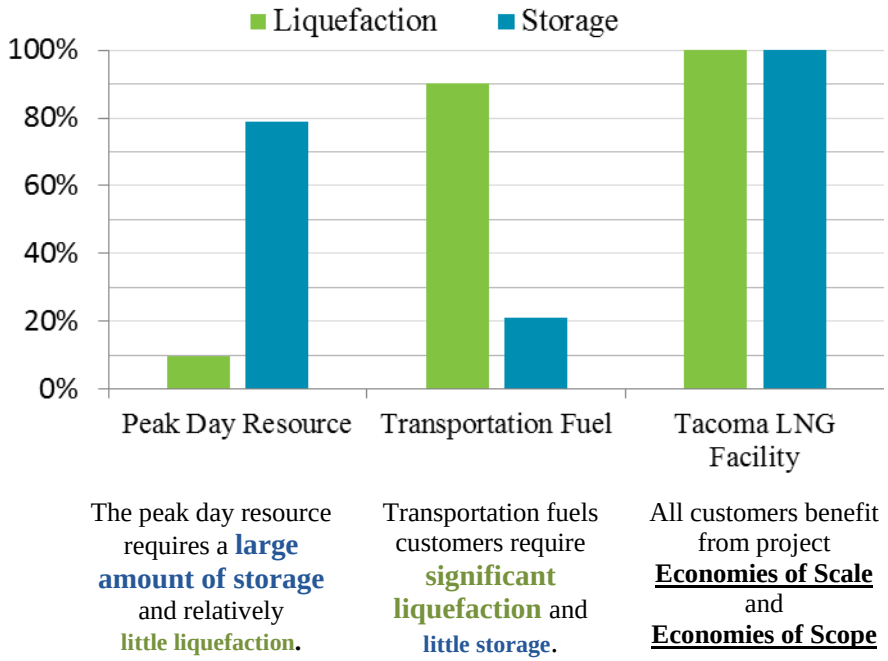
A. PSE evaluates various resource alternatives available to reliably meet customer demand and determines which resource, or set of resources, most cost effectively meets its customer demand. PSE evaluated the Tacoma LNG Project in comparison with long-haul interstate pipeline capacity as well as regional underground natural gas storage service and interstate pipeline storage redelivery service. Since interstate pipeline capacity in PSE's service territory is generally fully subscribed, especially considering the level of PSE's resource needs, the resource alternatives analysis evaluated expansion of the regional pipeline grid.

By spreading the high fixed costs associated with an LNG facility across different customers (core gas customers, TOTE fuel sales, and non-regulated fuel sales), the Tacoma LNG Facility is selected as a least-cost resource to provide peak-day capacity in PSE's analyses of resource alternatives. Please see the Prefiled Direct Testimony of Clay Riding, Exhibit No. ___(CR-1HCT), for a discussion of PSE's analysis of alternatives in the 2013 IRP.

Q. Please describe the benefits of serving markets other than peak-day supply for PSE's retail natural gas customers.

A. Although the primary purpose of the Tacoma LNG Facility is to provide peak-day supply for PSE's retail natural gas customers, the project's benefits are enhanced by serving additional markets. LNG facilities are capital intensive and, therefore, costs for all customers are reduced when the facilities' cost can be distributed across a larger customer base. The peak-shaving component of the Tacoma LNG Facility requires significant storage and relatively small liquefaction capacity. Conversely, the marine, heavy-duty trucking and other fuel markets require significant, steady liquefaction and minimal storage.

Figure 1. Illustrative Usage of Elements of the Tacoma LNG Facility Between Peak Day Resource and Fuel Sales



By combining these complementary load profiles, PSE can optimize the Tacoma LNG Facility and minimize peaking-resource costs for PSE's retail natural gas customers.

Q. Has PSE already secured a long-term agreement for the sale of LNG from the Tacoma LNG Facility?

A. Yes. PSE has entered into an LNG Fuel Supply Agreement, dated October 27, 2014 (the "TOTE Special Contract") with Totem Ocean Trailer Express ("TOTE"). Please see Exhibit No. ___(CR-3HC) for a copy of the TOTE Special Contract.

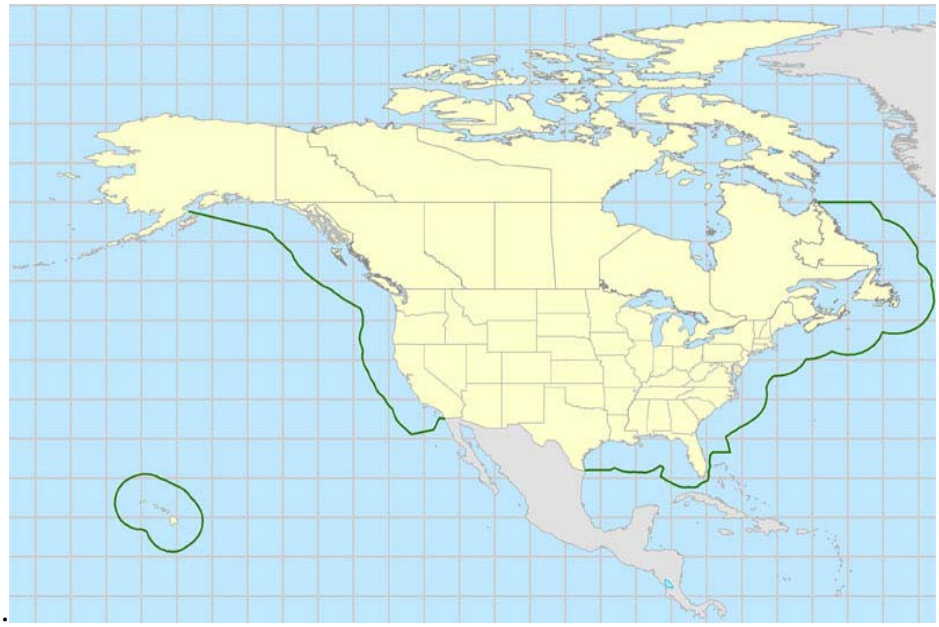
TOTE is a shipping company that transports approximately 30 percent of all consumer goods shipped to Alaska. It operates two Orca class ships between the Port of Tacoma and the Port of Anchorage on a regimented schedule of sailings departing from Tacoma every Wednesday and Friday evening. TOTE will consume more than 39 million gallons of LNG annually, which represents 44 percent of the liquefaction capacity of the Tacoma LNG Facility. TOTE is fully owned by Saltchuk Resources Inc., a privately held investment group based in Seattle. TOTE's decision to use LNG (as opposed to a petroleum based fuel) has been driven by regulatory, environmental, and economic factors.

Q. Please describe the regulatory factors that drive TOTE's decision to use LNG as a marine fuel.

A. In 2010, the International Maritime Organization, a United Nations organization, approved the North American Emissions Control Area, establishing more

stringent emissions standards within 200 nautical miles of the U.S. and Canadian coast. Please see Figure 2 for a depiction of the North American Emissions Control Area.

Figure 2. North American Emissions Control Area



The Environmental Protection Agency is responsible for administering vessels operating in the North American Emissions Control Area. Ships operating within the North American Emissions Control Area were required to reduce the sulfur content of their fuel to one percent (1%) in August 2012 and must further reduce it to one-tenth of one percent (0.1%) by 2015. Vessel operators can meet the new standard by switching to lower sulfur diesel fuels, installing scrubbers, or transitioning to a cleaner fuel, such as LNG. Many operators, including TOTE, are finding that LNG is the preferred alternative.

Q. Are there environmental benefits to the use of LNG as a fuel?

A. Yes. When compared to diesel or marine fuel oil, LNG has significant environmental benefits. Emissions from natural gas do not contain particulates or SO_X. LNG has been embraced by the American Lung Association of the Upper Midwest as a "Clean Air Choice". Carbon dioxide emissions are also greatly reduced. Using LNG in long-haul trucking operations can result in a 25 percent reduction of CO_2 emissions.

Q. What are the economic benefits to the use of LNG as a fuel?

A. Recent development of unconventional gas resources has stabilized the cost of natural gas. At the same time, increasing global demand has (until recently) increased the cost of diesel and other petroleum-based fuels. PSE commissioned Wood Mackenzie, a leading energy sector consultant, to study these market factors to determine whether the price spread between natural gas and oil is sustainable. Wood Mackenzie concluded that the price spread between natural gas and oil is sustainable, even with the dramatic decline in petroleum prices over the past year. Please see the Prefiled Direct Testimony of Harold "Skip" York, Exhibit No. ___(HSY-1T), and supporting exhibits thereto, for a discussion of the Wood Mackenzie studies.

Q. Did PSE conduct similar studies to determine the regional market potential for LNG in trucking, maritime, and industrial applications?

A. Yes. PSE retained Concentric Energy Advisors to assess the regional market potential for LNG in trucking, maritime, and industrial applications. Concentric

Energy Advisors determined that growth in the demand for LNG in the marine market will be driven by North American Emissions Control Area requirements, which phase in over the next several years, resulting in higher fuel costs to the maritime industry. Concentric Energy Advisors determined that the heavy-duty trucking demand for LNG will be driven by the price spread between low-sulfur diesel and natural gas. Please see the Prefiled Direct Testimony of Melissa J. Bartos, Exhibit No. ___(MJB-1T), and supporting exhibits thereto, for a discussion of the Concentric Energy Advisors studies.

III. OVERVIEW OF THE TACOMA LNG PROJECT

Q. Please describe why PSE is developing the Tacoma LNG Project.

A PSE is developing the Tacoma LNG Project to achieve the following objectives:

1. to provide PSE's gas system with a cost-effective resource to meet peak-day loads; and

2. to provide LNG as a transportation fuel to large maritime and trucking customers as well as industrial users in the region.

Q. Please describe the use of the Tacoma LNG Project to provide additional peaking capability for PSE's core gas customers.

A. LNG plants have a long history as a natural gas resource used by utilities to manage peak-day loads. Natural gas is liquefied over the summer months and stored in a large cryogenic tank. During peak winter days, the liquefied gas is vaporized and injected into the distribution system. This resource will allow PSE to avoid purchasing 365-day pipeline capacity to meet a peak demand for a few

days that may only occur once every few winters. PSE has compared the cost of this peak-day resource with other available peak-day resource alternatives and has determined that the Tacoma LNG Project is the most cost-effective resource option under a wide range of scenarios.

Q. Please describe the use of the Tacoma LNG Facility to provide LNG as a transportation fuel to large maritime and trucking customers as well as industrial users in the region.

A. The Tacoma LNG Project will also help meet the demand for LNG as a fuel by regional maritime, heavy duty trucking and industrial customers. The development of an LNG facility to provide fuels for the transportation market is consistent with the regional and state efforts of the Puget Sound Clean Air Agency, U.S. EPA and the Washington Department of Ecology, to establish strategies and programs aimed at reducing impacts to the Puget Sound air shed. In order to meet the demands of the maritime market, the Tacoma LNG Facility will be located on the water at the Port of Tacoma and will be capable of filling TOTE ships and other vessels or bunker barges. The Tacoma LNG Facility will also be capable of filling LNG tanker trucks that will supply regional truck fleets and industrial customers.

A. Siting of the Tacoma LNG Facility

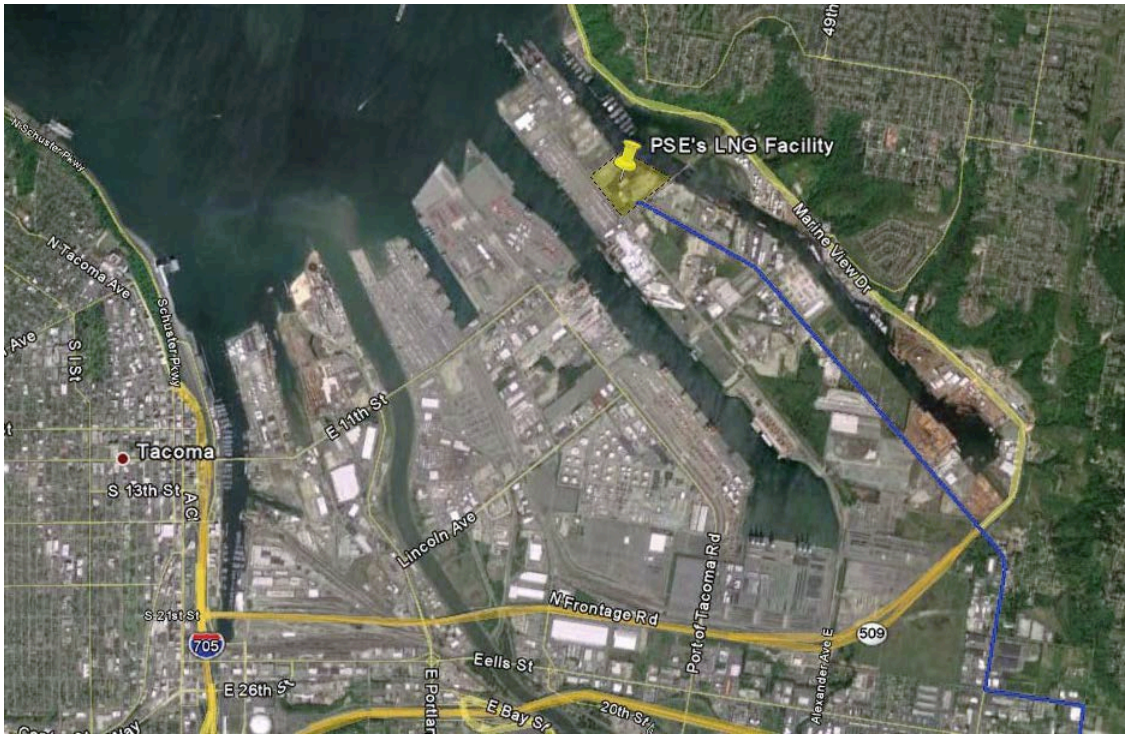
Q. Where will the Tacoma LNG Facility be situated?

A. After exploring multiple locations, PSE selected a 33-acre parcel at the Port of Tacoma as the most suitable site for the Tacoma LNG Facility. The site is located

on the Hylebos waterway, on the corner of East 11th Street and East Alexander Avenue. The site will be connected to PSE's North Tacoma high pressure system with approximately four miles of new 16-inch pipe, allowing the plant to inject gas directly into PSE's distribution system. Please see the Prefiled Direct Testimony of Larry E. Anderson, Exhibit No. ___(LEA-1T), for a discussion of the approximately four miles of new 16-inch pipe.

Please see Figure 3 below for the location of the Tacoma LNG Facility.

Figure 3. Tacoma LNG Facility Location
(new high pressure pipeline shown in blue)



Q. Why does the Tacoma LNG Facility require a 33-acre parcel?

A. The size of the parcel necessary for the Tacoma LNG Facility is, in part, dictated by regulations. All LNG plants are subject to the regulations of 49 CFR 193. These regulations are administered and enforced by the U.S. Department of

Transportation through the Pipeline and Hazardous Materials Administration ("PHMSA") and/or by delegation of regulatory authority to state agencies (the WUTC is one of the state agencies who have enforcement authority of PHMSA regulations). Often, these regulations are taken into account for purposes of project approval by the Federal Energy Regulatory Commission ("FERC"); however, the Tacoma LNG Facility will not be FERC jurisdictional. In Washington, PHMSA delegates enforcement of 49 CFR 193 to the Washington Office of Pipeline Safety.

The regulations detailed in 49 CFR 193 use national engineering standards and fire codes to help guide the siting restrictions of LNG facilities. These restrictions include exclusions zones for vapor dispersion and heat radiation, zoning requirements, and setbacks from key infrastructure. In addition to restrictions mandated by code, there are also public relations and commercial constraints as well.

The regulations in 49 CFR 193 (augmented by National Fire Protection Association ("NFPA") Standard 59A) defines two exclusion zones related to an LNG facility: a thermal radiation exclusion zone and a vapor dispersion exclusion zone. Thermal radiation exclusion zones are defined by the resulting heat from a fire from the largest containment of LNG onsite, which in PSE's case is the full containment tank. Therefore the thermal radiation zone is based on the tank and defined by the surface area and height of its roof. The vapor dispersion exclusion zone is defined by the results of a computer model that

simulates a release of LNG or refrigerant from plant piping. The size of this zone is determined largely by the maximum flow rate and pressure of any pipe in the plant.

Exclusion zones must be contained on the parcel with the exception of transient zones (i.e., waterways and roads) and in some instances public lands. The exclusion zones associated with the Tacoma LNG Facility will be driven by a tank that is large enough to support PSE's peak shaving needs and the storage required by PSE's customers (approximately eight million gallons), and plant piping and liquefaction equipment. PSE projects that the minimum site acreage to accommodate these exclusion zones is 30 acres, even though the actual footprint of plant equipment is substantially smaller.

Q. Why did PSE select the Port of Tacoma as the site for the Tacoma LNG Facility?

A. PSE selected the Port of Tacoma as the site for the Tacoma LNG Facility for several reasons. First, the site at the Port of Tacoma is one of a few parcels in areas zoned for industrial use that are both large enough to satisfy these regulations and capable of supporting PSE's resource needs.

Second, the selected site at the Port of Tacoma is ideally situated for serving LNG fuel markets. The site is located across Alexander Avenue from the TOTE terminal. This location will allow PSE to meet TOTE's needs directly and at an inherent cost advantage over a network of LNG barges and bunker stations, which

may be available in the future. The Tacoma LNG Facility will also be able to serve other marine customers from this location.

The Port of Tacoma is also centrally located to serve regional trucking demand concentrated in the Tacoma, Federal Way and Kent areas. The selected site has access to an existing rail spur that connects to the Tacoma Public Rail system. While LNG is not currently transported by rail in the U.S., this may prove a viable option for transporting large volumes of LNG in the future.

B. Lease with the Port of Tacoma for the Tacoma LNG Facility

Q. Please describe PSE's lease with the Port of Tacoma for the Tacoma LNG Facility.

A. PSE has negotiated lease terms with the Port of Tacoma for the selected site. PSE is leasing approximately 30.15 acres of uplands and approximately three acres of submerged lands, together with all improvements located thereon, for the purpose of LNG production, storage, and distribution.

The lease has an effective operating term of 25 years from the date of first commercial operations. The lease also provides for a two-year due diligence and permitting phase, and a three-year construction phase. With timely notice, the lease provides for a 25-year renewal, provided at least 45% of the capacity involves marine uses (either fueling or transported by marine vessel); otherwise, the renewal is at the Port of Tacoma's discretion.

C. Infrastructure Associated with the Tacoma LNG Facility

Q. Please describe the infrastructure associated with the Tacoma LNG Facility.

A. The infrastructure associated with the Tacoma LNG Facility includes the equipment and foundations located at the Port of Tacoma. At a high level, the project infrastructure includes the following components:

- site improvement and foundations;
- buildings and structures;
- receiving equipment;
- pretreatment system;
- liquefaction train and compressors;
- LNG tank;
- vaporization train;
- truck loading system;
- underground pipeline to TOTE's vessels;
- marine fueling, or bunkering system;
- in-water works;
- balance-of-plant equipment; and
- substation.

1. Site Improvement and Foundations

Q. Please describe the necessary site improvement and foundations associated with the Tacoma LNG Facility.

A. The Tacoma LNG Facility will require significant soil improvement work to meet federal seismic guidelines for an LNG plant. Soil improvement techniques will be injected grout piles, which will mitigate settling and liquefaction risks associated with a large seismic event. In addition, the storage tank will be built upon a foundation with seismic isolators.

2. Buildings and Structures

Q. Please describe the necessary buildings and structures associated with the Tacoma LNG Facility.

A. The Tacoma LNG Facility will repurpose an existing building as the control room, office space, maintenance area, and indoor housing for weather-sensitive equipment. Other structures will include a compressor building, power distribution center building, an existing warehouse, and potentially sound walls around the liquefaction heat exchangers.

3. Receiving Equipment

Q. Please describe the necessary receiving equipment associated with the Tacoma LNG Facility.

A. Receiving equipment includes inlet gas compression, particulate filtration, and metering.

4. Pretreatment System

Q. Please describe the necessary pretreatment system associated with the Tacoma LNG Facility.

A. The pretreatment system removes carbon dioxide and sulfur compounds. The pretreatment system also removes any entrained water in the gas stream that has not been previously removed. The gas that is sent to the liquefaction train is mainly methane with a small amount of nitrogen.

5. Liquefaction Train and Compressors

Q. Please describe the liquefaction train and compressors associated with the Tacoma LNG Facility.

A. The gas is cooled to –260 degrees Fahrenheit, using a heat exchanger to transfer heat from the gas to a refrigerant loop. The refrigerant loop is made up of other hydrocarbons and requires a large compressor, which consumes the majority of the electric load at the Tacoma LNG Facility (approximately 14 MW). The system used at the Tacoma LNG Facility will be a single mixed- refrigerant system.

6. LNG Tank

Q. Please describe the LNG tank associated with the Tacoma LNG Facility.

A. LNG will be stored on-site in a full-containment, field-erected tank, which consists of an inner nickel-steel tank and an outer concrete tank that share a common roof. In the event of a failure of the inner tank, the outer tank will contain the LNG. LNG is removed from the tank via submersed pumps that

pump LNG out through the roof. There are no wall penetrations in either tank. The tank is designed to withstand a 2,500-year earthquake, which greatly exceeds the earthquake design used for roads, bridges and most other commercial structures. LNG in full-containment tanks is stored at slightly above atmospheric pressure. The fact that the tanks are not kept under pressure is a key safety feature of LNG plants.

7. Vaporization Train

Q. Please describe the necessary vaporization train associated with the Tacoma LNG Facility.

A. The vaporization train includes the facilities that PSE will need on a peak day to convert LNG in the storage tank to a gas vapor and inject it into the distribution system to serve PSE's retail gas customers.

8. Truck Loading System

Q. Please describe the necessary truck loading system associated with the Tacoma LNG Facility.

A. The Tacoma LNG Facility will have two truck loading racks capable of filling tanker trucks simultaneously. Tanker trucks will be used to support the operations of PSE's gas system by moving LNG to PSE's satellite LNG facility in Gig Harbor, Washington, or by use of mobile LNG vaporization and injection units. Tanker trucks may also supply LNG to non-regulated LNG fuel customers like large interstate trucking fleets or small volume marine users like the Washington State Ferry system.

9. Underground Pipeline to TOTE's Vessel

Q. Please describe the necessary underground pipeline to TOTE's vessel.

A. The Tacoma LNG Facility will include a cryogenic pipeline that will connect the onsite storage tank to a fueling station located at TOTE's berthing location. This line will be buried, and cross beneath a public road, a rail line and TOTE's property.

10. Marine Fueling System

Q. Please describe the necessary marine fueling system associated with the Tacoma LNG Facility.

A. The marine fueling system will be located near the stern end of TOTE's berthing location. The system will include a loading arm for fueling TOTE's vessels, and associated equipment necessary for safety and security of the operation.

11. In-Water Work

Q. Please describe the necessary in-water work associated with the Tacoma LNG Facility.

A. In order to support TOTE's bunkering operations, PSE must construct a small platform near the stern end of TOTE's berthing location. The platform will support parts of the marine fueling system and will be large enough to meet federal standards for personnel operations and emergency access.

12. Balance-of-Plant Equipment

Q. Please describe the necessary balance-of-plant equipment associated with the Tacoma LNG Facility.

A. Balance-of-plant equipment includes an onsite backup generator for essential loads, a gas flare, instrument air system, water treatment unit, power distribution systems, safety and security equipment, and an integrated plant control system.

13. Substation and Electricity

Q. Please describe the necessary substation associated with the Tacoma LNG Facility.

A. Tacoma Power will construct a substation on site that connects to its 115 kV transmission system. PSE will own the substation. Electricity for the Tacoma LNG Facility will be procured at Mid-C based market prices and will be wheeled through Tacoma Power's 115 kV transmission system. The main energy consumer at the Tacoma LNG Facility will be the liquefaction compressor, which will draw approximately 14 MWs of electricity.

14. Natural Gas Supply and Distribution Upgrades

Q. Please describe the infrastructure support for the Tacoma LNG Facility.

A. Northwest Pipeline's interstate system will deliver natural gas to PSE's distribution system, which will in turn deliver the gas to the Tacoma LNG Facility. The PSE distribution system will also deliver revaporized gas from the Tacoma LNG Facility to the PSE system for further delivery to PSE gate stations.

PSE's distribution system will require improvements to support the delivery of natural gas both to and from the Tacoma LNG Facility, including a pressure increase on an existing section of pipe, constructing a new limit station, modifying an existing gate station and adding approximately five miles of new higher pressure pipe. The increase in operating pressure on the existing pipeline (from 250 pounds per square inch gage (psig) to 500 psig) is a planned system upgrade to be implemented in 2017. The upgrade process began in 2014 with a Pressure Authorization Request to the Commission. Please see the Prefiled Direct Testimony of Larry E. Anderson, Exhibit No. ___(LEA-1T), for a discussion of the natural gas distribution upgrades associated with the Tacoma LNG Project.

D. Capacity of the Tacoma LNG Facility

Q. What will be the capacity of the Tacoma LNG Facility?

A. The Tacoma LNG Facility will be capable of liquefying 250,000 gallons of LNG per day and storing approximately 8 million gallons of LNG on site. The Tacoma LNG Facility will be capable of injecting 66,000 decatherms per day ("Dth/day") of vaporized gas and diverting up to 19,000 Dth/day of gas into PSE's distribution system to provide 85,000 Dth/day of peak-day supply. The Tacoma LNG Facility will also dispense LNG to other end-use customers via a tanker truck loading system and marine loading facilities located on the water.

IV. TACOMA LNG PROJECT SCHEDULE AND CAPITAL BUDGET

Q. Please describe the processes for the development and construction of the Tacoma LNG Project.

A. PSE has divided the processes involving the Tacoma LNG Project into two distinct phases: (i) the development phase and (ii) the construction phase. Development activities include the work PSE must undertake prior to entering into the construction contracts to build the Tacoma LNG Facility. The construction phase begins with the execution of the Engineering, Procurement and Construction ("EPC") contract and other construction contracts, and continues through the commercial operations date.

A. The Tacoma LNG Facility

1. The Development Phase

Q. Please describe the development phase associated with the Tacoma LNG Project.

A. The development phase associated with the Tacoma LNG Project began in 2012 with due diligence and feasibility studies. The major project development work includes the following:

- commercial and technical feasibility and due diligence;
- identifying and securing the site for the Tacoma LNG Facility and procuring all required real estate rights for the Tacoma LNG Project;
- preliminary facility design;

- preliminary distribution upgrades design;
- contracting with potential long-term LNG fuel customers, including TOTE; and
- permitting.

Q. Has PSE developed a capital budget associated with development phase activities?

A. Yes. PSE has developed a capital budget of approximately $13.6 million (not including an allowance for funds used during construction ("AFUDC")) associated with activities performed or to be performed during the development phase of the Tacoma LNG Facility. Please see Exhibit No. ___(RG-3C) at page 1 for the capital budget associated with activities performed or to be performed during the development phase of the Tacoma LNG Facility. The capital budget shown in Exhibit No. ____(RG-3C) at page 1 assumes that PSE receives all necessary permits and approvals in calendar year 2015. The spend shown could change if permits or approvals are appealed or delayed.

Q. When does PSE anticipate that the development phase will end?

A. Assuming that there are no significant permitting or other development delays, PSE anticipates seeking approval from the PSE Board of Directors for the Tacoma LNG Project, including approval to enter into an EPC contract at the board meeting scheduled for November 5, 2015.

2. The Construction Phase

Q. Please describe the construction phase associated with the Tacoma LNG Project.

A. Construction activities will commence immediately after final approval by the Board of Directors of the Tacoma LNG Project, including approval of the EPC contract with additional contracts awarded for building demolition, ground improvement, and underground utilities.

The construction timeframe for the plant is well defined by scheduling information provided by Chicago Bridge & Iron, one of the EPC contractor candidates. Based upon its extensive experience, its overhead costs for mobilization, and the expected liquidated damages in the EPC contract, PSE believes its schedule projection to be accurate, if not somewhat conservative. Black and Veatch has provided preliminary schedule projections that show similar timeframes if it is chosen to be the EPC contractor.

Regardless of the winning EPC firm, the field-erected tank is the critical path item with an expected duration of 27 months. If permit approval is delayed, one schedule mitigation strategy will be to complete the ground improvements under the tank first and begin tank construction in parallel with the remaining ground improvement and utility installation under the process area.

Finally, in-water work in the Blair and Hylebos waterways is limited to a period between July 15 and February 16 of each year due to marine ecology

requirements. Construction of any marine elements will occur during these timeframes.

Q. Has PSE developed a capital budget associated with activities to be performed during the construction phase of the Tacoma LNG Facility?

A. Yes. PSE has developed a capital budget of approximately $297.1 million (not including AFUDC) associated with activities to be performed during the construction phase of the Tacoma LNG Facility. Please see Exhibit No. ___(RG-3C) at pages 2-5 for the capital budget associated with activities to be performed during the construction phase of the Tacoma LNG Facility.

B. Natural Gas Distribution Upgrades

Q. Please describe the schedule and capital budget associated with the natural gas distribution upgrades.

A. As discussed in the Prefiled Direct Testimony of Larry E. Anderson, Exhibit No. ___(LEA-1T), PSE will be making improvements to the PSE distribution system, in part, to support the Tacoma LNG Facility, including approximately five miles of new pipeline in the cities of Fife/Tacoma and Pierce County, a new limit station and existing gate station modifications ("Distribution Upgrades"). This work is expected to be completed by the end of 2017 to support plant startup and commissioning in 2018.

PSE has developed a capital budget of approximately $53.5 million (not including AFUDC) associated with the natural gas distribution upgrades discussed in the Prefiled Direct Testimony of Larry E. Anderson, Exhibit No. ___(LEA-1T).

Please see Exhibit No. ___(RG-3C) at page 6 for the capital budget associated with these natural gas distribution upgrades. In a later proceeding, PSE will request to incorporate the actual costs of these natural gas distribution upgrades into PSE's gas rate base for the recovery of these costs through rates. Revenues associated with regulated fuel sales to TOTE and bundled, non-regulated fuel sales to third party customers other than TOTE will be credited against these costs.

Q. Why does the previous response specifically refer to bundled, non-regulated fuel sales to third party customers?

A. PSE anticipates offering two distinct types of non-regulated fuel sales: bundled fuel sales and tolling fuel sales. The method by which PSE will recover costs of the use of its natural gas distribution system will vary between the two types of sales by virtue of the structure of such sales.

In bundled fuel sales, PSE will provide the natural gas commodity and all services associated with LNG to non-regulated bundled customers and include all such costs in the price per gallon charged. For these bundled fuel sales, PSE does not charge itself a distribution charge to transport the natural gas to the Tacoma LNG Facility for liquefaction, storage, and dispensing. Therefore, for bundled, non-regulated fuel sales, PSE will credit regulated operations with an amount based on applicable rate schedules for the use of the natural gas distribution system.

In tolling fuel sales, the non-regulated tolling customer will provide its own natural gas commodity and be responsible for transporting the commodity to the

Tacoma LNG Facility for liquefaction, storage, and dispensing. To do so, the non-regulated tolling customer must take distribution service to the Tacoma LNG Facility from PSE pursuant to applicable rate schedules. Therefore, there is no need to credit regulated operations from non-regulated tolling fuel sales because PSE will recover the costs for the use of its natural gas distribution system associated with non-regulated tolling fuel sales through the applicable rate schedules for distribution.

C. Total Projected Capital Budget for the Tacoma LNG Project

Q. What is the total projected capital budget for the Tacoma LNG Project?

A. The total projected capital budget for the Tacoma LNG Facility is approximately $310.7 million (not including AFUDC). Please see the sum of Exhibit No. ___(RG-3C) at page 7, line 77 (projected budget of $13.6 million (not including AFUDC) for the development phase) and line 78 (projected budget of $297.1 million (not including AFUDC) for the construction phase) for the total projected capital budget for the Tacoma LNG Facility.

The total projected capital budget for the natural gas distribution upgrades is approximately $53.5 million (not including AFUDC). Please see the sum of Exhibit No. ___(RG-3C) at page 7, line 79 for the total projected capital budget for the natural gas distribution upgrades.

The total projected capital budget for the Tacoma LNG Project is approximately $364.2 million (not including AFUDC) or approximately $421.0 million (including AFUDC). Please see the Exhibit No. ___(RG-3C) at page 7, line 81

(projected capital budget for the Tacoma LNG Project (not including AFUDC)) and line 84 (projected capital budget for the Tacoma LNG Project (including AFUDC)).

V. COST ALLOCATION ASSOCIATED WITH THE TACOMA LNG FACILITY INVESTMENT

A. Rationale for the Structure of the Tacoma LNG Facility Investment

Q. Please describe the structure of the Tacoma LNG Facility investment.

A. The Tacoma LNG Facility will offer regulated and non-regulated service. PSE will:

(i) offer the already subscribed capacity of the Tacoma LNG Facility (i.e., the capacity associated with peak shaving and sales to TOTE of LNG as marine fuel) as regulated services and

(ii) offer the unsubscribed capacity of the Tacoma LNG Facility (i.e., the capacity not associated with either peak shaving or sales to TOTE of LNG as marine fuel) as non-regulated services.

Q. What does it mean that PSE will offer the already subscribed capacity of the Tacoma LNG Facility as regulated services?

A. By offering the already subscribed capacity of the Tacoma LNG Facility (i.e., the capacity associated with peak shaving and sales to TOTE of LNG as marine fuel) as regulated services, PSE will recover the investment as it would any other rate-based asset.

Q. What does it mean that PSE will offer the unsubscribed capacity of the Tacoma LNG Facility as non-regulated services?

A. By offering the unsubscribed capacity of the Tacoma LNG Facility (i.e., the capacity not associated with either peak shaving or sales to TOTE of LNG as marine fuel) as non-regulated services, PSE will offer sales to non-TOTE third parties at non-regulated prices. Neither core gas customers nor TOTE will be responsible for costs associated with the capacity allocated to non-regulated service. Costs and revenues associated with the non-regulated service will be part of PSE's 'non-utility' book. The non-regulated operations will credit core gas customers for expenses incurred on behalf of the non-regulated service (i.e., use of the distribution service to serve non-regulated sales or support of corporate shared services).

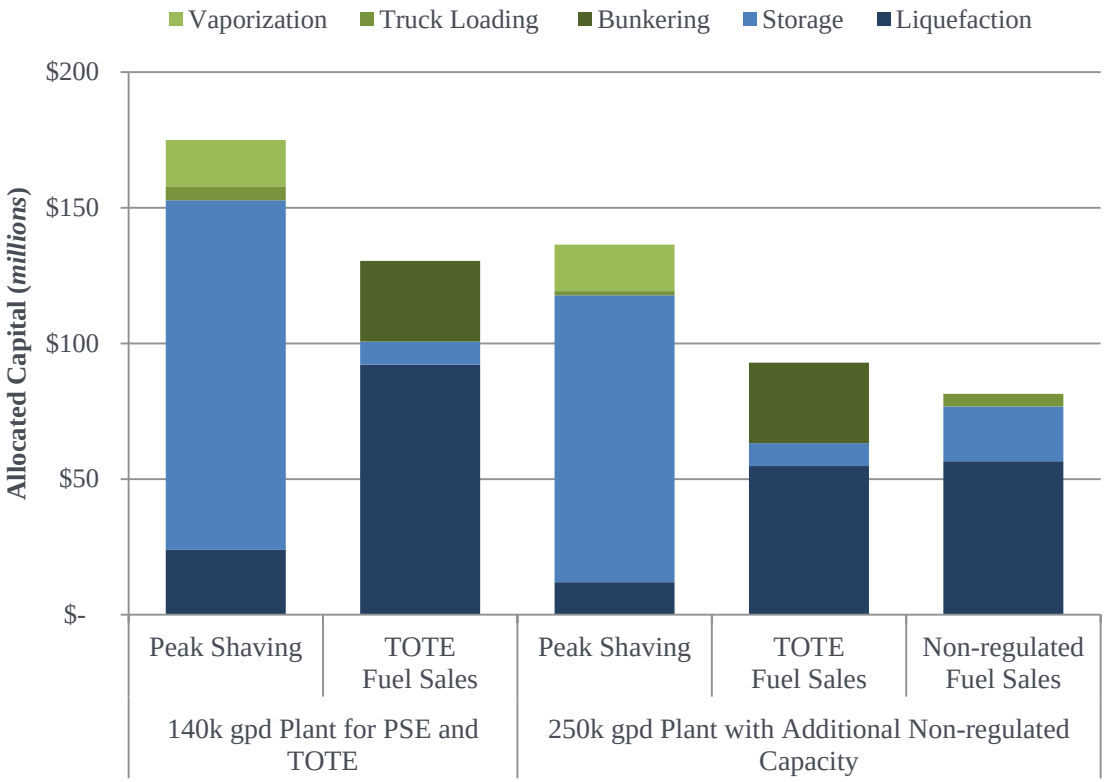
Q. Did PSE consider alternative structures for the Tacoma LNG Facility?

A. Yes. PSE considered alternative structures for the Tacoma LNG Facility, including building a plant with capacity to meet only the needs of the peak shaving resource and TOTE. PSE's analysis, however, determined that the cost savings associated with reducing the capacity of the plant were rather small (i.e., less than two percent of the budgeted costs of the Tacoma LNG Facility).

Moreover, PSE's core gas customers benefit from lower capital costs for the peak shaving portion of the Tacoma LNG Facility because portions of the facility are being allocated to non-regulated fuel sales. Please see Figure 4 for a comparison of the allocation of capital for the Tacoma LNG Facility for a smaller,

140,000 LNG gallons per day capacity plant (serving peak shaving and TOTE fuel sales) and the larger 250,000 LNG gallons per day capacity plant (serving peak shaving, TOTE fuel sales, and non-regulated fuel sales).

Figure 4. Tacoma LNG Facility Allocated Budgeted Capital Costs



PSE remains committed to the use of LNG as a fuel source and believes that the current uncertainty associated with decreases in global petroleum prices are a temporary phenomenon.[1] Furthermore, the International Maritime Organization will begin to phase in additional regulations on ship emissions in the next decade, which will accelerate the marine industry's conversion to LNG ships.

[1] Please see the Prefiled Direct Testimony of Harold "Skip" York, Exhibit No. ___(HSY-1T), and supporting exhibits thereto, for studies commissioned by PSE with respect to the outlook of global petroleum prices.

While PSE believes the future market for LNG fuel in the Puget Sound region is robust,[2] PSE will not place the risk associated with unsubscribed capacity on PSE core gas customers by recovering the entire Tacoma LNG Facility investment in regulated rates. Instead, PSE will seek to recover only the investment associated with peak shaving service and TOTE sales in regulated rates. Shareholders will remain at risk for all costs not associated with those two functions.

Q. Why is PSE offering sales of LNG to TOTE for use as a marine fuel as a regulated service?

A. PSE is offering sales of LNG to TOTE for use as a marine fuel as a regulated service to achieve the economies of scale to ensure that PSE can provide its gas customers with a least-cost resource to meet peaking needs. PSE could seek to offer sales of LNG to TOTE as an non-regulated service, but PSE's core gas customers would not receive some of the benefits of regulated fuel sales to TOTE, including, for example, the short-term contract premium to be paid by TOTE under the TOTE Special Contract. This would increase the cost to core gas customers of the portions of the plant for peaking service as compared to PSE's proposal of including TOTE as a regulated service.

As discussed previously, while the primary purpose of the Tacoma LNG Facility is to provide peak-day supply for PSE's retail natural gas customers, the project's benefits are enhanced by serving additional markets. LNG facilities are capital intensive and, therefore, costs for all customers are reduced when the facilities'

[2] Please see the Prefiled Direct Testimony of Melissa F. Bartos, Exhibit No. ___(MFB-1T), and supporting exhibits thereto, for studies commissioned by PSE with respect to the outlook of LNG markets.

cost can be distributed across a larger customer base. The peak-shaving component of the Tacoma LNG Facility requires significant storage and relatively small liquefaction capacity. Conversely, the marine, heavy-duty trucking and other fuel markets require significant, steady liquefaction and minimal storage. By combining these complementary load profiles, PSE can optimize the Tacoma LNG Facility and minimize peaking-resource costs for PSE's retail natural gas customers.

Furthermore, by offering LNG fuel sales to third parties other than TOTE as a non-regulated service, PSE shields its core gas customers from the risks inherent in the unsubscribed capacity of the Tacoma LNG Facility, thereby mitigating risks to PSE's core gas customers associated with such capacity. Conversely, PSE's core gas customers will not benefit from any additional revenues associated with non-regulated fuel sales. PSE core gas customers, however, will benefit by the very fact that PSE is offering non-regulated services because a portion of the capital expenditures associated with the Tacoma LNG Facility will not be recovered in regulated rates. Please see Figure 4 for the allocation of budgeted capital costs of the Tacoma LNG Facility.

B. Allocation of Costs and Revenues Associated with the Tacoma LNG Facility Investment

Q. Please describe the allocation of costs and revenues associated with the Tacoma LNG Facility.

A. As discussed in the Prefiled Direct Testimony of Susan E. Free, Exhibit No. ___(SEF-1T), PSE will allocate costs and revenues associated with the

Tacoma LNG Facility pursuant to the current cost allocation methodology approved by the Commission in Docket Nos. UE-960195 and U-072375. This existing approved cost allocation methodology is appropriate for use in allocating costs between the regulated and non-regulated portions of the Tacoma LNG Facility.

PSE will allocate the capital used to develop and construct the Tacoma LNG Facility amongst the various services provided by the plant. The two main services of the Tacoma LNG Facility are liquefaction and storage. The other services are related to dispensing LNG from the plant, including vaporization, truck loading, and marine vessel bunkering.

Q. Has PSE prepared allocations of capital associated with each category of service for the Tacoma LNG Facility?

A. Yes. PSE has prepared allocations of budgeted capital costs to each category of service for the Tacoma LNG Facility. Please see Exhibit No. ___(RG-4C) for the projected capital allocated to each service and the projected contribution from each of the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales).

Q. How did PSE calculate the allocations provided in Exhibit No. ___(RG-4C)?

A. PSE has allocated capital costs to facility services based upon the projected costs of those services. The actual costs allocated to each service will be set when the Tacoma LNG Facility is put into service and final costs are known. Services are the functions that the Tacoma LNG Facility provides PSE and its customers. The

services are specifically: liquefaction, storage, bunkering, truck loading, and vaporization. Costs that cannot be directly assigned to the services are assigned as "common project costs" and are then allocated to use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales) based on their utilization of the two primary facility services: liquefaction and storage.

1. Projected Liquefaction Allocators and Allocation of Budgeted Capital Costs for Liquefaction Facilities

Q. Please describe the liquefaction allocator.

A. The capital costs associated with liquefaction include the costs of facilities used to receive natural gas, treat the gas, cool the gas below its boiling point and deliver the gas to onsite storage. PSE projects the following need for liquefaction for each use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales):

Table 1. Projected Liquefaction Allocators

	Projected Capacity (gallons/day)	Projected Allocation Percentage
Peak Shaving	24,333	10%
TOTE Fuel Sales	111,046	44%
Non-regulated Fuel Sales	114,621	46%
Total Plant	**250,000**	**100%**

Q. Given the projected liquefaction allocators provided in Table 1, how would the budgeted capital costs of the Tacoma LNG Facility associated with liquefaction service be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with liquefaction service of approximately $88.5 million (not including AFUDC) or $104.1 million (including AFUDC). Given the projected liquefaction allocators provided in Table 1, the budgeted capital costs of the Tacoma LNG Facility associated with liquefaction would be allocated as follows:

Table 2. Allocation of Capital Costs Budgeted for Liquefaction Facilities ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	10%	$8.6	$10.1
TOTE Fuel Sales	44%	$39.3	$46.3
Non-regulated Fuel Sales	46%	$40.6	$47.7
Total Plant	**100%**	**$88.5**	**$104.1**

2. Projected Storage Allocators and Allocation of Budgeted Capital Costs for Storage Facilities

Q. Please describe the storage allocator.

A. The capital costs associated with storage include the costs of the site-erected full containment cryogenic storage tank as well as the costs of foundations and other

supporting facilities. PSE projects the following need for storage for each use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales):

Table 3. Projected Storage Allocators

	Projected Capacity (gallons)	Projected Allocation Percentage
Peak Shaving	6,300,000	79%
TOTE Fuel Sales	500,000	6%
Non-regulated Fuel Sales	1,200,000	15%
Total Plant	**8,000,000**	**100%**

Q. Given the projected storage allocators provided in Table 3, how would the budgeted capital costs of the Tacoma LNG Facility associated with storage service be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with storage service of approximately $96.2 million (not including AFUDC) or $113.5 million (including AFUDC). Given the projected storage allocators provided in Table 3, the budgeted capital costs of the Tacoma LNG Facility associated with storage service would be allocated as follows:

Table 4. Allocation of Capital Costs Budgeted for Storage Facilities ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	79%	$75.8	$89.4
TOTE Fuel Sales	6%	$6.0	$7.1
Non-regulated Fuel Sales	15%	$14.4	$17.0
Total Plant	**100%**	**$96.2**	**$113.4**

3. Projected Bunkering Allocators and Allocation of Budgeted Capital Costs for Bunkering Facilities

Q. Please describe the bunkering allocator.

A. The capital costs associated with bunkering include facilities used to move the LNG from the onsite storage tank to the marine loading facility, which will be located at TOTE's berthing location. Pursuant to the TOTE Special Contract, the facilities devoted to bunkering will be fully allocated to TOTE. Any sales made by the non-regulated service that utilizes the bunkering facilities will generate a revenue credit to TOTE. The effect will be to reduce TOTE's regulated revenue and offset the corresponding revenue deficiency with a transfer from the nonregulated sales. PSE projects the following need for bunkering for each use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales):

Table 5. Projected Bunkering Allocators

	Projected Allocation Percentage
Peak Shaving	0%
TOTE Fuel Sales	100%
Non-regulated Fuel Sales	0%
Total Plant	**100%**

Q. Given the projected bunkering allocators provided in Table 5, how would the budgeted capital costs of the Tacoma LNG Facility associated with bunkering service be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with bunkering service of approximately $29.7 million (not including AFUDC) or $34.6 million (including AFUDC). Given the projected bunkering allocators provided in Table 5, all of the budgeted capital costs of the Tacoma LNG Facility associated with bunkering service would be directly assigned to TOTE:

Table 6. Allocation of Capital Costs Budgeted for Bunkering Facilities ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	0%	$0	$0
TOTE Fuel Sales	100%	$29.7	$34.6
Non-regulated Fuel Sales	0%	$0	$0
Total Plant	**100%**	**$29.7**	**$34.6**

4. Projected Truck Loading Allocators and Allocation of Budgeted Capital Costs for Truck Loading Facilities

Q. Please describe the truck loading allocator.

A. The capital costs associated with truck loading include facilities used to move the LNG from the onsite storage tank to tanker trucks or ISO[3] containers. PSE's non-regulated LNG fuel sale customers will be the primary users of the truck loading facilities, but PSE core customers will also use the truck loading facilities because PSE will use those facilities to serve PSE's Gig Harbor LNG facility and mobile LNG operations that support the PSE gas system. TOTE will not use this service and will not pay for truck loading facilities. PSE projects the following need for truck loading for each use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales):

Table 7. Projected Truck Loading Allocators

	Allocation Percentage
Peak Shaving	25%
TOTE Fuel Sales	0%
Non-regulated Fuel Sales	75%
Total Plant	**100%**

[3] ISO stands for International Standards Organization, and an ISO container is a certain type of container that can be transported by truck, barge, rail, or other mode of transportation.

Q. Given the projected truck loading allocators provided in Table 7, how would the budgeted capital costs of the Tacoma LNG Facility associated with truck loading service be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with truck loading service of approximately $6.2 million (not including AFUDC) or $7.3 million (including AFUDC). Given the projected truck loading allocators provided in Table 7, the budgeted capital costs of the Tacoma LNG Facility associated with tuck loading service would be allocated as follows:

Table 8. Allocation of Capital Costs Budgeted for Truck Loading Facilities ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	25%	$1.6	$1.8
TOTE Fuel Sales	0%	$0	$0
Non-regulated Fuel Sales	75%	$4.7	$5.5
Total Plant	**100%**	**$6.2**	**$7.3**

5. Projected Vaporization Allocators and Allocation of Budgeted Capital Costs for Vaporization Facilities

Q. Please describe the vaporization allocator.

A. The capital costs associated with vaporization include facilities used to vaporize the gas and inject it into PSE's distribution system. Vaporization service and the facilities devoted to it are only utilized by PSE core gas customers. Other LNG

customers will not pay for vaporization. PSE projects the following need for vaporization for each use (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales):

Table 9. Projected Vaporization Allocators

	Projected Allocation Percentage
Peak Shaving	100%
TOTE Fuel Sales	0%
Non-regulated Fuel Sales	0%
Total Plant	**100%**

Q. Given the projected vaporization allocators provided in Table 9, how would the budgeted capital costs of the Tacoma LNG Facility associated with vaporization service be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with storage service of approximately $17.1 million (not including AFUDC) or $20.2 million (including AFUDC). Given the projected vaporization allocators provided in Table 9, all of budgeted capital costs of the Tacoma LNG Facility associated with vaporization service would be directly assigned to core gas customers:

Table 10. Allocation of Capital Costs Budgeted for Vaporization Facilities ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	100%	$17.1	$20.2
TOTE Fuel Sales	0%	$0	$0
Non-regulated Fuel Sales	0%	$0	$0
Total Plant	**100%**	**$17.1**	**$20.2**

6. Projected Common Project Costs Items Allocators and Allocation of Budgeted Common Items Capital Costs

Q. Please describe the common project costs items cost allocator.

A. The capital costs associated with common project cost items include facilities that cannot be allocated to any individual service (e.g., facility development, civil and site work, site utilities, etc.). Approximately 20% of the Tacoma LNG Facility costs will be common items. PSE has allocated these costs based on the projected weighted-average utilization of liquefaction and storage services.

Table 11. Projected Common Items Allocators

	Projected Allocation Percentage
Peak Shaving	46%
TOTE Fuel Sales	24%
Non-regulated Fuel Sales	30%
Total Plant	**100%**

Q. Given the projected common project cost items allocators in Table 11, how would the budgeted projected common project cost items be allocated between the uses (i.e., peak shaving, TOTE fuel sales, and non-regulated fuel sales)?

A. PSE has budgeted capital costs associated with common project cost items of approximately $72.9 million (not including AFUDC), or $88.3 million (including AFUDC). Given the projected common project cost item allocators in Table 11, the budgeted capital costs of the Tacoma LNG Facility associated with common project costs items would be allocated as follows:

Table 12. Allocation of Capital Costs Budgeted for Common Project Cost Items ($ in millions)

	Projected Allocation Percentage	Budgeted Capital Expenditure (No AFUDC)	Budgeted Gross Plant (Includes AFUDC)
Peak Shaving	46%	$33.3	$40.4
TOTE Fuel Sales	25%	$17.9	$21.6
Non-regulated Fuel Sales	30%	$21.7	$26.3
Total Plant	**100%**	**$72.9**	**$88.3**

C. Allocation of Total Budgeted Capital Costs Associated with the Tacoma LNG Facility

Q. Please provide the allocation of total budgeted capital costs associated with the Tacoma LNG Facility.

A. PSE has budgeted total capital costs associated with the Tacoma LNG Facility of approximately $310.7 million (not including AFUDC) or $368.1 million

(including AFUDC but before the reduction by the AFUDC reserve account (projected to be approximately $3.5 million), which reduces the AFUDC on the non-regulated portion of the plant, as discussed below).

Please see Table 13 for the allocation of budgeted total capital costs (not including AFUDC) associated with the Tacoma LNG Facility among peak shaving, TOTE fuel sales, and non-regulated fuel sales.

Table 13. Allocation of Budgeted Total Capital Costs (Not Including AFUDC) Associated with the Tacoma LNG Facility ($ in miilions)

	Peak Shaving	TOTE Fuel Sales	Non-regulated Fuel Sales	Total
Liquefaction	$8.6	$39.3	$40.6	**$88.5**
Storage	$75.8	$6.0	$14.4	**$96.2**
Bunkering	$0	$29.7	$0	**$29.7**
Truck Loading	$1.6	$0	$4.7	**$6.2**
Vaporization	$17.1	$0	$0	**$17.1**
Common Items	$33.3	$17.9	$21.7	**$72.9**
Total	**$136.4**	**$92.9**	**$81.4**	**$310.7**
Percentage of Total	**44%**	**30%**	**26%**	**100%**

Please see Table 14 for the allocation of budgeted total capital costs (including AFUDC) associated with the Tacoma LNG Facility among peak shaving, TOTE fuel sales, and non-regulated fuel sales.

Table 14. Allocation of Budgeted Total Capital Costs (Including AFUDC) Associated with the Tacoma LNG Facility ($ in miilions)

	Peak Shaving	TOTE Fuel Sales	Non-regulated Fuel Sales	Total
Liquefaction	$10.1	$46.3	$47.7	**$104.1**
Storage	$89.4	$7.1	$17.0	**$113.5**
Bunkering	$0	$34.6	$0	**$34.6**
Truck Loading	$1.8	$0	$5.5	**$7.3**
Vaporization	$20.2	$0	$0	**$20.2**
Common Items	$40.4	$21.6	$26.3	**$88.3**
Total	**$161.9**	**$109.6**	**$96.6**	**$368.1**[4]
Percentage of Total	**44%**	**30%**	**26%**	**100%**

Q. How will PSE use the total capital allocators presented in Table 14?

A. PSE will use the total capital allocators presented in Table 14 to allocate certain operations and maintenance costs for the Tacoma LNG Facility. Please see the Prefiled Direct Testimony of Clay Riding, Exhibit No. ___(CR-1HCT), for a discussion of the use of the total capital allocators to allocate certain operations and maintenance costs for the Tacoma LNG Facility.

[4] The $368.1 million total is before the reduction by the AFUDC reserve account (projected to be approximately $3.5 million), which reduces the AFUDC on the non-regulated portion of the plant, as discussed below.

Q. Will PSE collect AFUDC on the non-regulated portion of the Tacoma LNG Facility?

A. During construction, PSE will initially record AFUDC at its authorized rate of return on the CWIP accounts for the entire project. PSE will also create an AFUDC reserve account and reduce the AFUDC on the non-regulated portion of the plant to an amount that reflects PSE's authorized cost of debt. PSE currently projects the AFUDC reserve account to be approximately $3.5 million at the end of construction, which would reduce the total projected capital budget for the Tacoma LNG Project to approximately $364.6 million (including AFUDC). As noted in footnote 4, this reserve amount of approximately $3.5 million is not reflected in the amounts reflected in Table 14. Please see the Prefiled Direct Testimony of Susan E. Free, Exhibit No. ___(SEF-1T), for a discussion of the AFUSC reserve account.

Q. Is PSE suggesting that the final allocation of costs associated with the Tacoma LNG Facility will be the very same percentages presented in Tables 1 through 14?

A. No. PSE is not suggesting that the final allocation of costs associated with the Tacoma LNG Facility will be the very same percentages presented in Tables 1 through 14. PSE based the allocations in these tables on the budgeted capital costs presented in Exhibit No. ____(RG-3C). To the extent that actual costs for any of the different capital categories of the Tacoma LNG Facility are greater or lesser than the amounts budgeted, then the allocation factors would change from those reflected in the referenced tables. In this proceeding, PSE is not seeking to

determine or gain approval or the exact allocation factor percentages. Instead, PSE is requesting that the Commission approve the methodology for the allocation of costs and revenues presented in PSE's filing. Then, the actual implementation and determination of the value for the cost allocators will be developed based on actual costs when known in accordance with the methodology approved in this proceeding and the actual values will be addressed in a later proceeding when rate recovery is requested.

VI. INTRODUCTION OF PSE WITNESSES

Q. Would you please describe briefly PSE's witnesses and the topics presented by each witness in this case?

A. The following witnesses present additional direct testimony on PSE's behalf.

Mr. Clay Riding, PSE's Director of Natural Gas Resources, provides a description of the determination of need for a cost-effective natural gas peaking resource, and the evaluation of alternatives, including the Tacoma LNG Project. He also provides a description of TOTE Special Contract and a description of the natural gas supply for the Tacoma LNG Facility.

Mr. James Hogan, PSE's Consulting Project Manager, provides an overview of the properties of LNG, the production, storage, and use of LNG, and safety issues associated with the Tacoma LNG Facility. He also discusses the contracting methods proposed for the construction of the Tacoma LNG Project, the permitting process, and the stakeholder outreach activities that PSE has undertaken with regard to the Tacoma LNG Project.

Mr. Larry E. Anderson, PSE's Supervisor Engineering for Gas System Integrity, describes the distribution system upgrades necessary to connect the Tacoma LNG Facility to the PSE gas distribution system for both use as a peak day resource and a source of LNG for LNG fuel sales. He also provides cost projections and a general description of how system improvement planning is conducted and how multiple options are analyzed.

Dr. Harold "Skip" York, Vice President – Integrated Energy at Wood Mackenzie, introduces two studies of the projected price spreads between ultra-low-sulfur diesel ("ULSD") and intermediate fuel oil 380 ("IFO-380") and Sumas natural gas prices.

Ms. Melissa Bartos, Assistant Vice President, at Concentric Energy Advisors, Inc., ("Concentric") introduces and presents the two reports prepared for PSE by Concentric. The reports present a market assessment for several potential LNG markets including heavy-duty on-road transportation, and marine, rail, and industrial conversion markets.

Ms. Susan E. Free, PSE's Manager of Revenue Requirement, describes the proposed accounting and cost flow methodology for the treatment being requested for both the regulated and non-regulated portions of the Tacoma LNG Project. The testimony is being provided in support of the PSE's request for approval of a defined cost allocation methodology for the Tacoma LNG Project that will be followed consistently over time.

Mr. Jon A. Piliaris, PSE's Manager, Pricing and Cost of Service, describes how costs associated with PSE's Tacoma LNG Project, including the Tacoma LNG Facility and the associated distribution main upgrades, are expected to be allocated in the future and the resulting impacts of these cost allocations to PSE's core gas customers.

VII. CONCLUSION

Q. Please summarize PSE's position in this proceeding.

A. PSE respectfully requests that the Commission issue:

(i) an order approving the TOTE Special Contract as a special contract pursuant to and consistent with the requirements of WAC 480-80-143; and

(ii) a declaratory order approving PSE's proposed methodology for allocating the costs of the Tacoma LNG Facility, which is consistent with the current cost allocation methodology approved by the Commission in Docket Nos. UE-960195 and U-072375, for use with respect to the allocation of costs and revenues associated with the regulated and non-regulated services that PSE will provide from the Tacoma LNG Facility.

PSE's development and construction of the Tacoma LNG Project benefits PSE customers, the Pacific Northwest and the natural environment.

The Tacoma LNG Project will help ensure continued dependable service and additional benefits to PSE natural gas customers.

- The Tacoma LNG Facility will be an integral part of PSE's strategy for serving its gas customers on the coldest days of the year.

- Serving new commercial markets—like transportation—helps lower costs for existing and future natural gas customers.

- The Tacoma LNG Facility provides critical infrastructure more cost-effectively for PSE customers.

- Construction of the Tacoma LNG Project will bring upgrades to local natural gas lines ahead of schedule, improving reliability to Tacoma customers.

The Tacoma LNG Project will provide important environmental benefits.

- Switching fuel from diesel to LNG reduces carbon dioxide emissions by up to 30 percent.

- Clean-burning LNG eliminates harmful particulate emissions.

- Converting to LNG will help companies like TOTE comply with new, stricter federal low-sulfur emission standards.

- The Tacoma LNG Project reduces the potential for harmful fuels spills that could damage Puget Sound.

- Driving innovative uses for natural gas demonstrates PSE's leadership in delivering cleaner energy options to customers.

The Tacoma LNG Project will generate important economic benefits for all South Sound residents.

- Switching to clean, abundant natural gas will help local employers remain competitive and protect local jobs.

- The Tacoma LNG Project helps the Port of Tacoma diversify its customer base, support new industries, and enhance its position as a driver of job creation and economic activity.

- Construction and operation of the Tacoma LNG Facility will create many direct and indirect jobs in the area.

Utilizing LNG reduces reliance on foreign fuels, using North America's natural resources here at home to benefit human health, the environment and the economy.

Q. Does this conclude your prefiled direct testimony in this proceeding?

A. Yes.